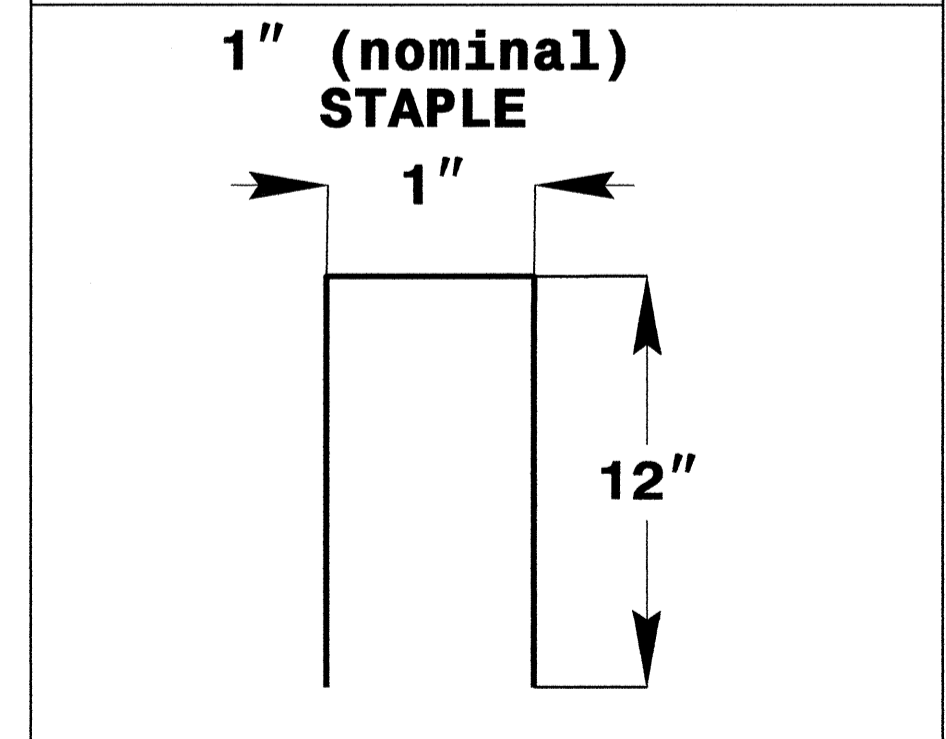
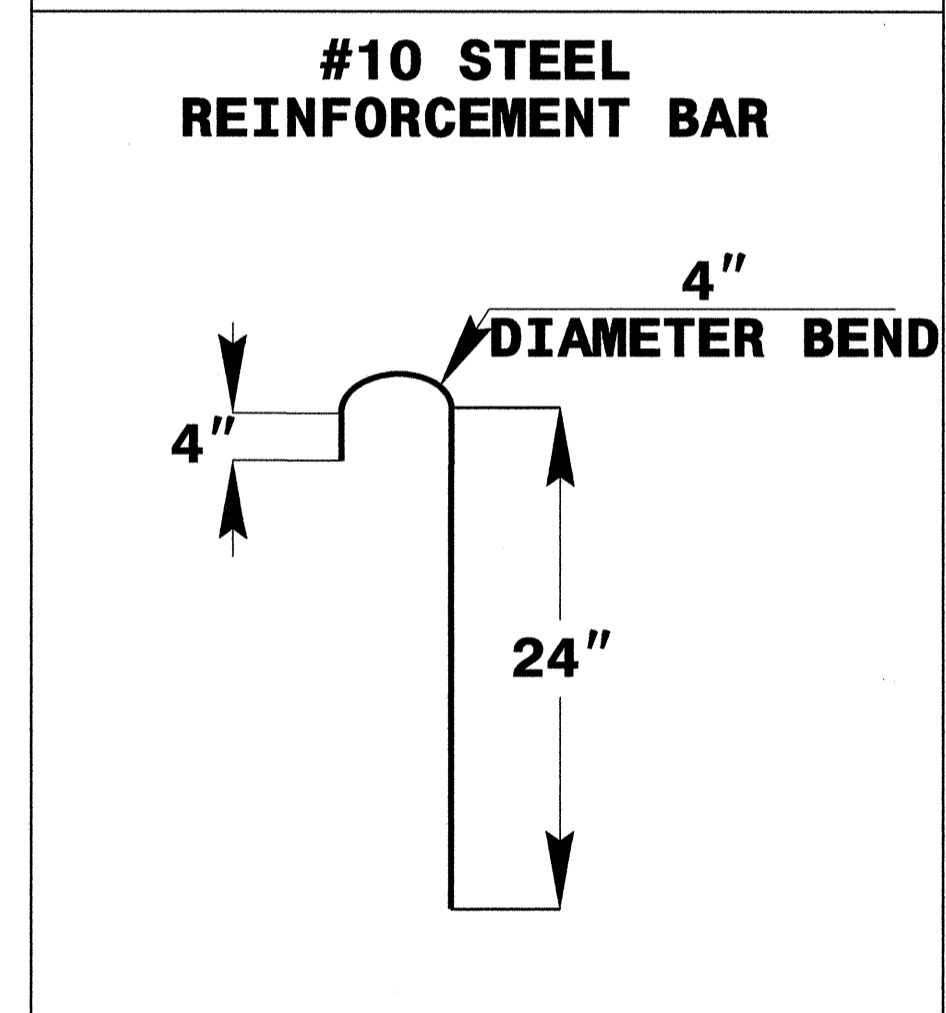
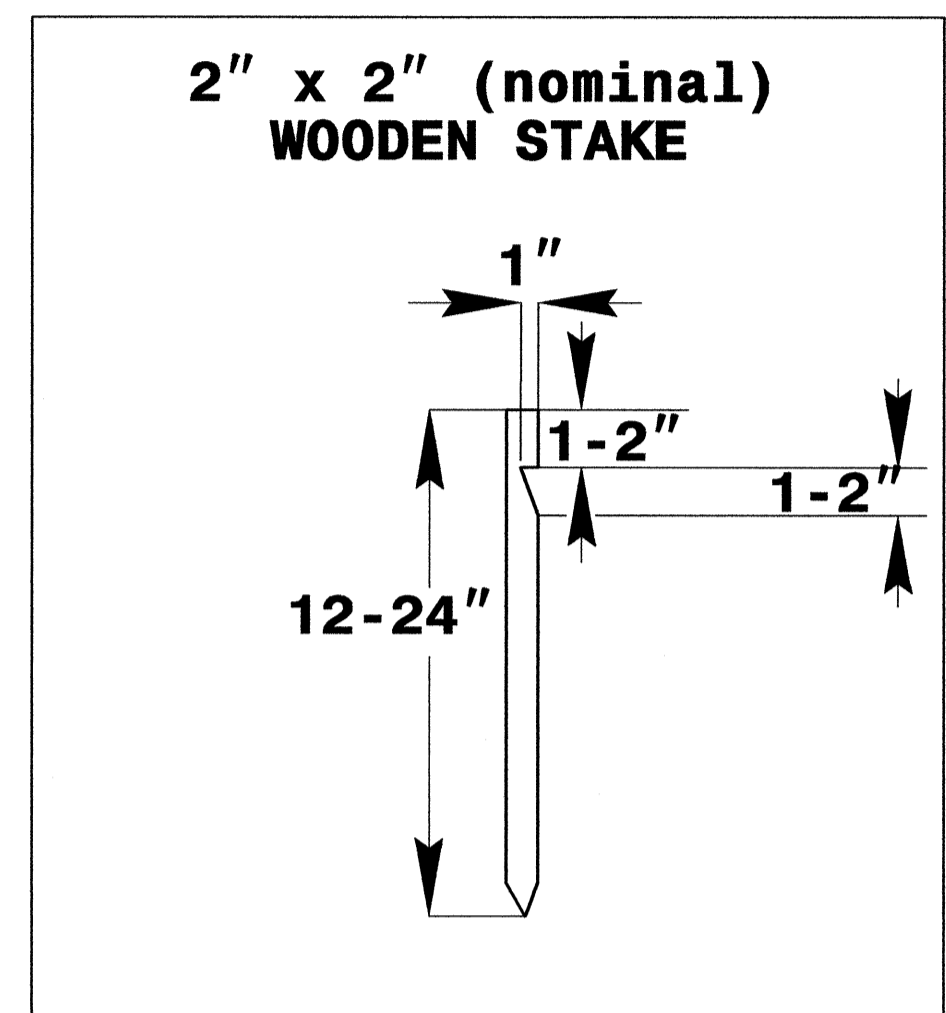
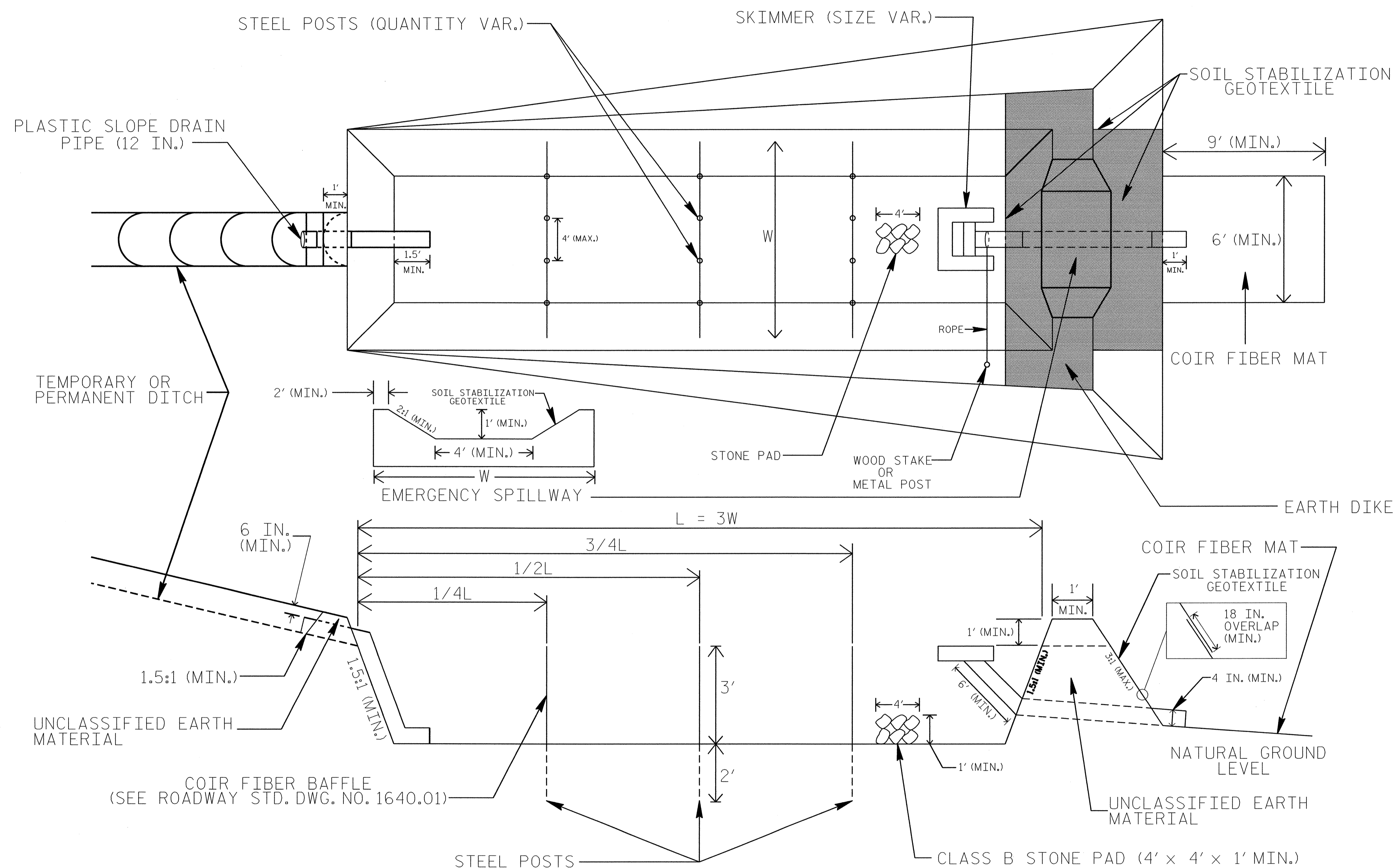




PROJECT REFERENCE NO. B-4273	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SKIMMER BASIN WITH BAFFLES DETAIL



## COIR FIBER MAT ANCHOR OPTIONS

### NOTES

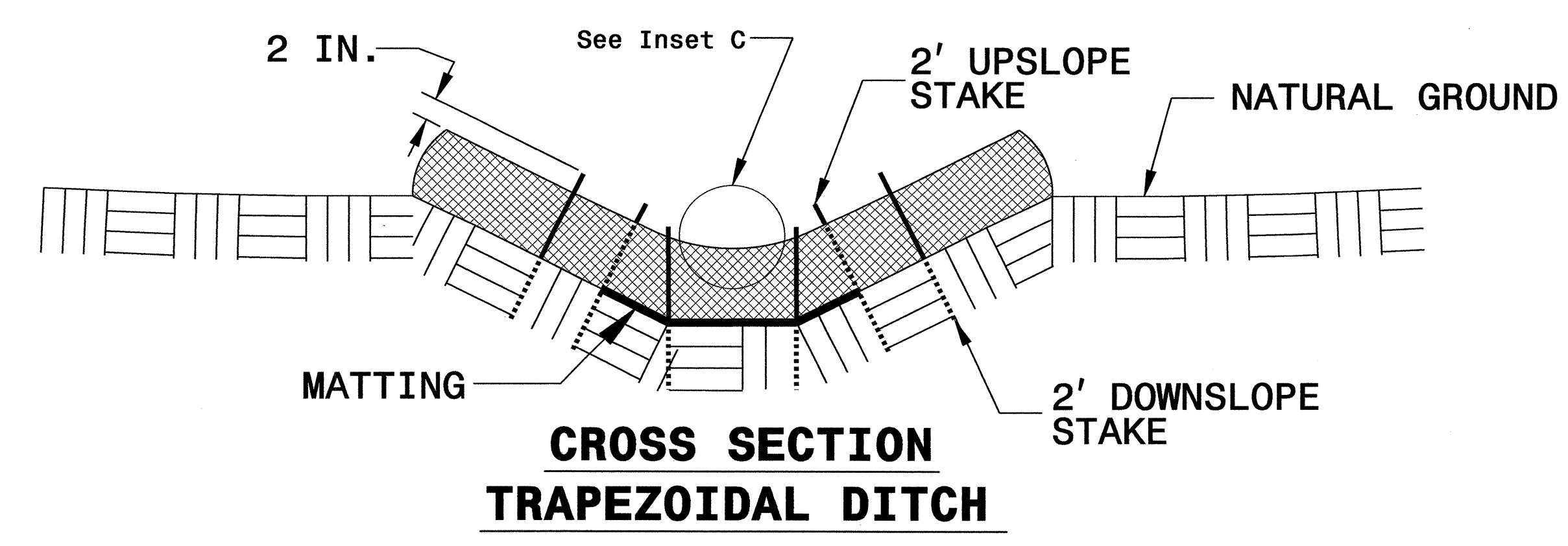
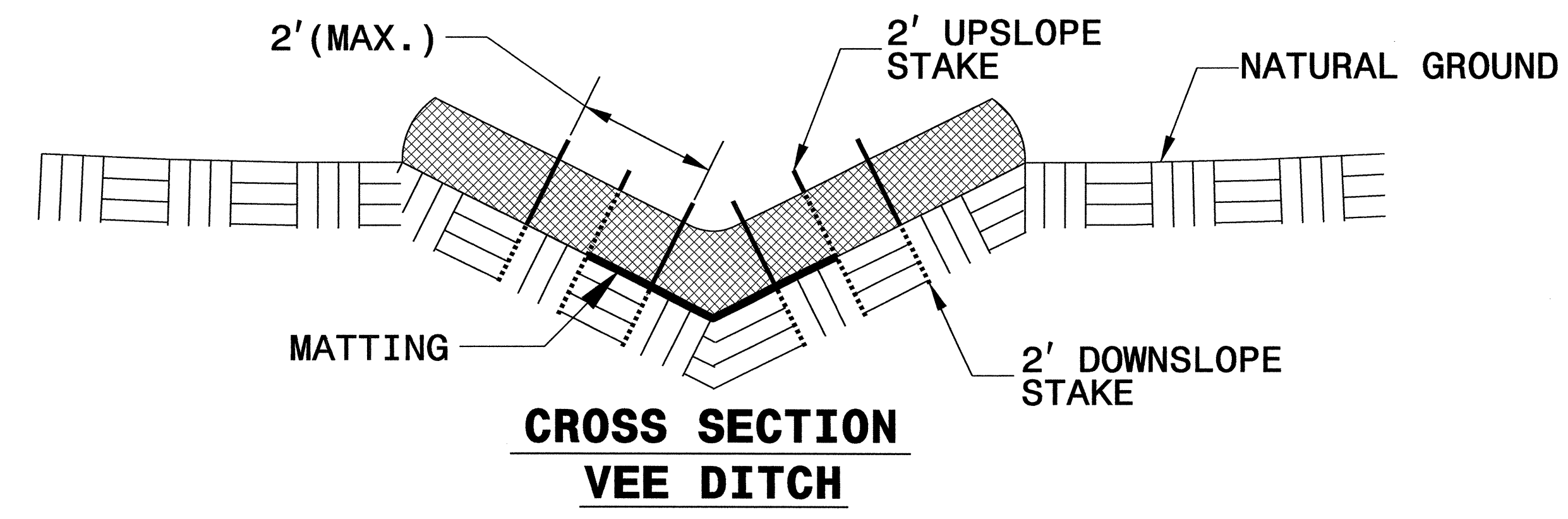
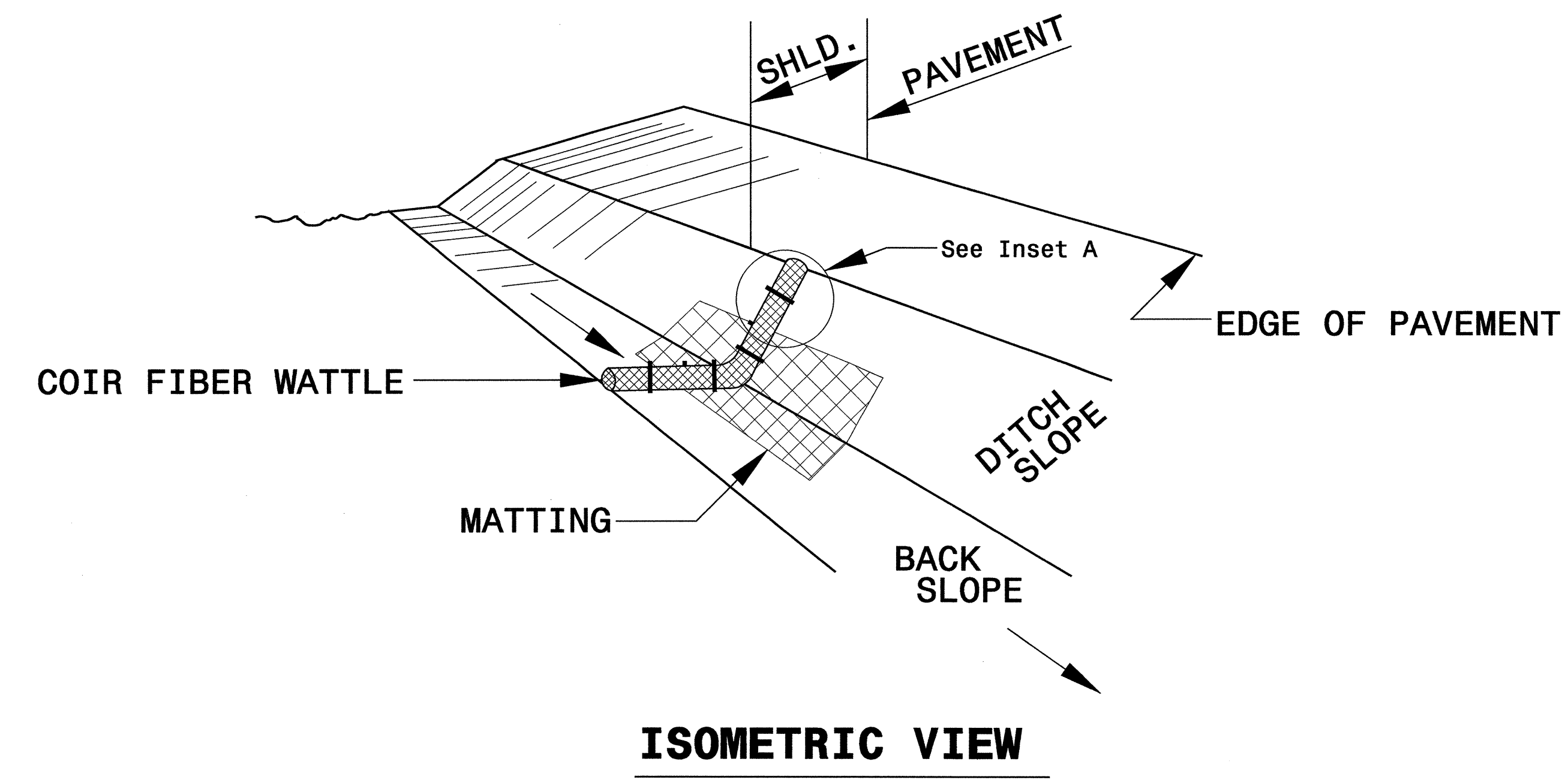
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

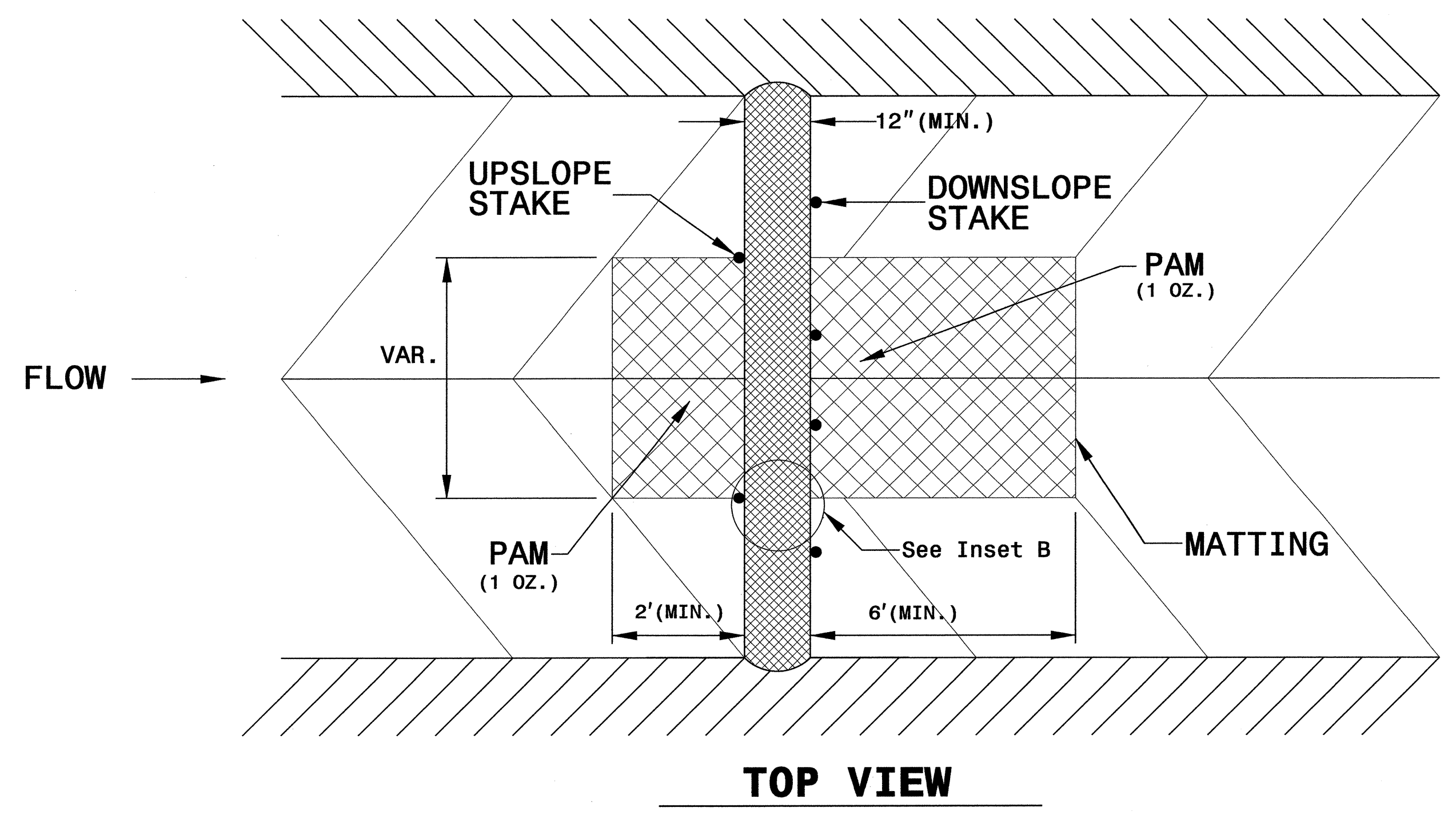
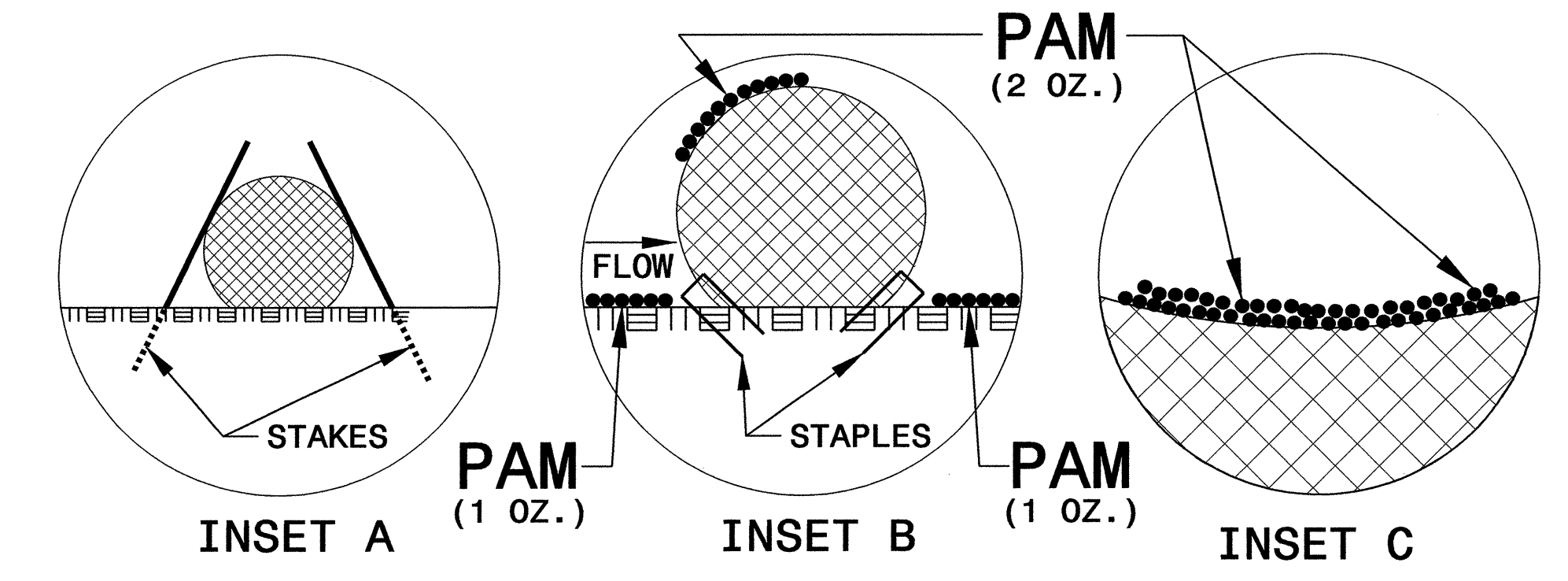


PROJECT REFERENCE NO. B-4273	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

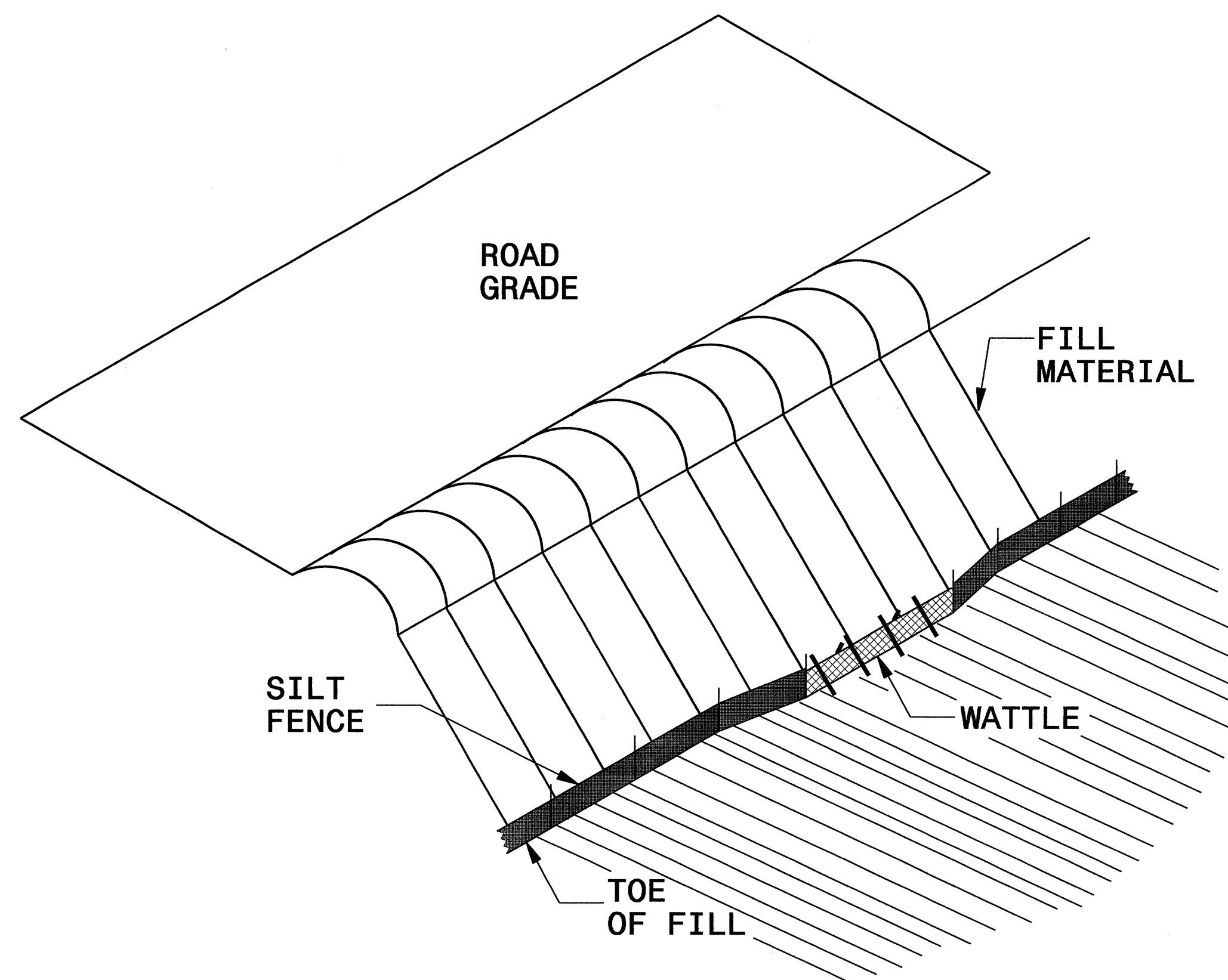


- NOTES:**
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
  - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
  - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
  - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
  - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
  - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
  - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
  - PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
  - INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

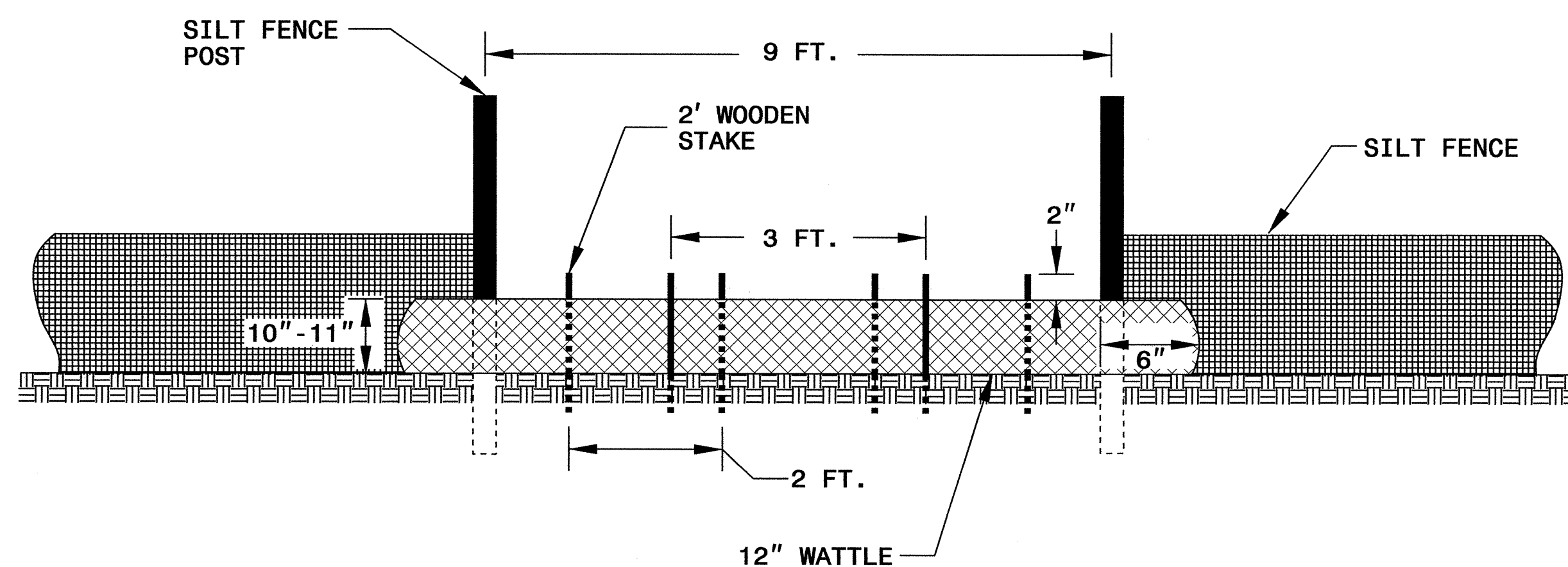


# SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. B-4273	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**ISOMETRIC VIEW**

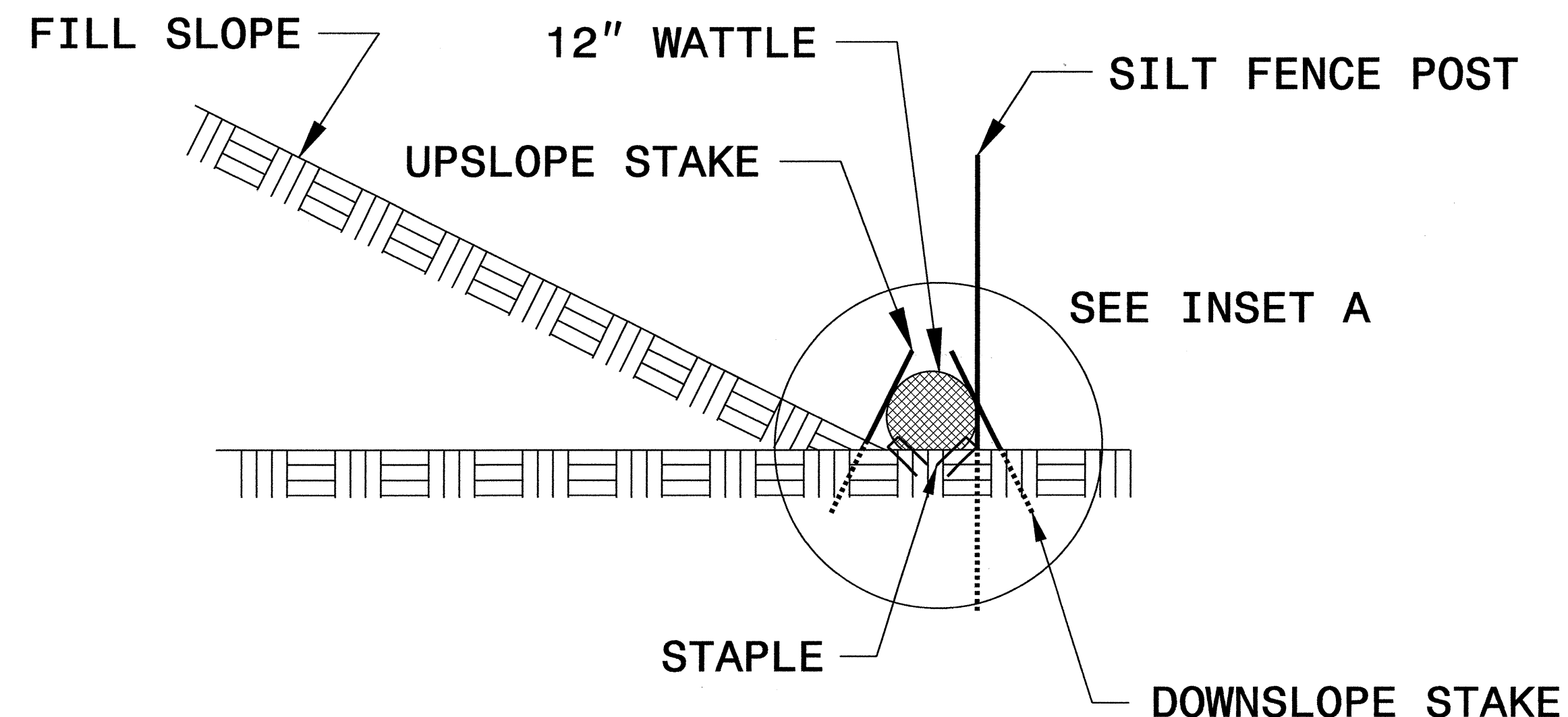
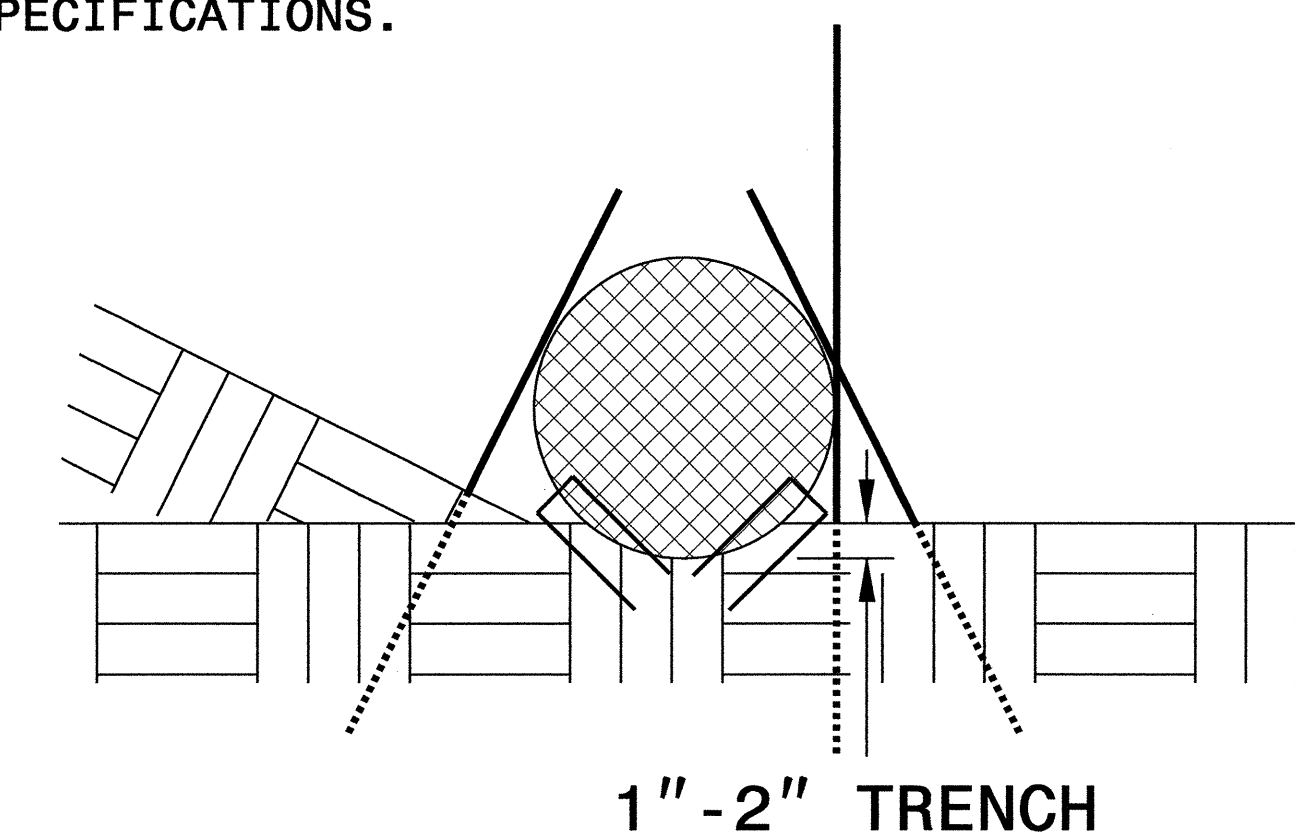


**VIEW FROM SLOPE**

**NOTES:**

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

**INSET A**



**SIDE VIEW**

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>B-4273</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.



STATE OF NORTH CAROLINA  
 DB 560 PG 1  
 PB 9 PG 353  
 PB 9 PG 354

WOODS

NAD 83

STATE OF NORTH CAROLINA  
 DB 936 PG 238  
 PB 10 PG 345

MARJORIE J. JOHNSON  
 DB 408 PG 73

R. REX CARPENTER  
 DB 44-C PG 217  
 PB 6 PG 50

SEE SHEET 6 FOR -L- PROFILE  
 SEE SHEETS X-2 THRU X-5 FOR CROSS SECTIONS

CLEARING AND GRUBBING  
 EROSION CONTROL FOR  
 CONSTRUCTION SHEET 4

NOTE:  
 PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
 AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
 DRAINAGE OUTLETS.

PROJECT REFERENCE NO.	SHEET NO.
B-4273	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

POT Sta. 8+27.77

**BEGIN TIP PROJECT B-4273**  
 Sta. 11+50.00 -L-

BL-4  
 PINC 27+08.58  
 8+98.22 -L-  
 18.32' RT

N 72°01'54.9" E

US 401 28' PAVED ROADWAY

GRAU 350

MATCHLINE SEE SHEET 5  
 STA. 20+00.00 -L-



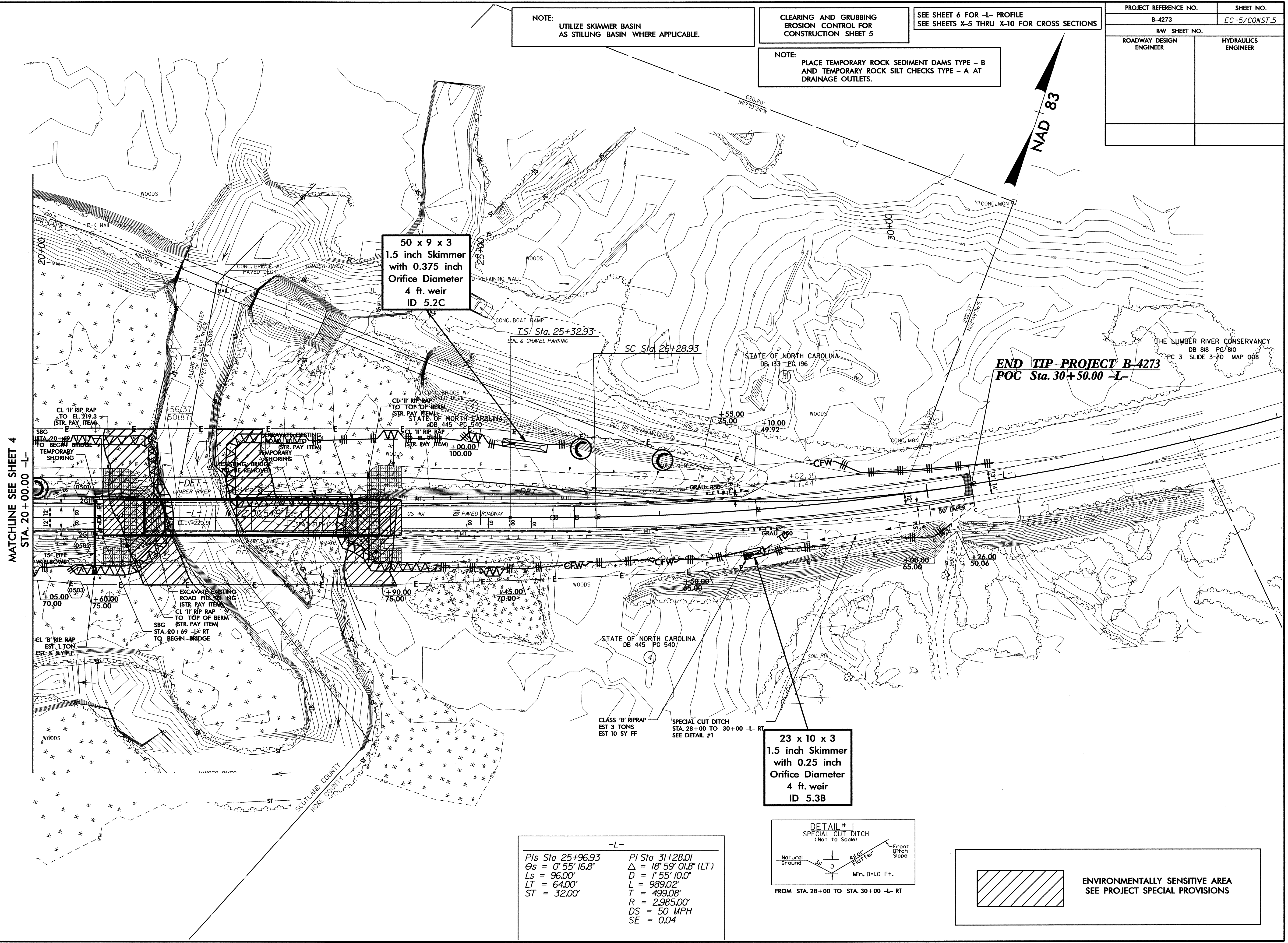
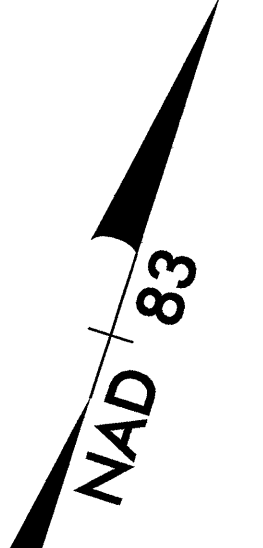
PROJECT REFERENCE NO.	SHEET NO.
B-4273	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

SEE SHEET 6 FOR -L- PROFILE  
SEE SHEETS X-5 THRU X-10 FOR CROSS SECTIONS

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



50 x 9 x 3  
1.5 inch Skimmer  
with 0.375 inch  
Orifice Diameter  
4 ft. weir  
ID 5.2C

**END TIP PROJECT B-4273**  
POC Sta. 30+50.00 -L-

MATCHLINE SEE SHEET 4  
STA. 20+00.00 -L-

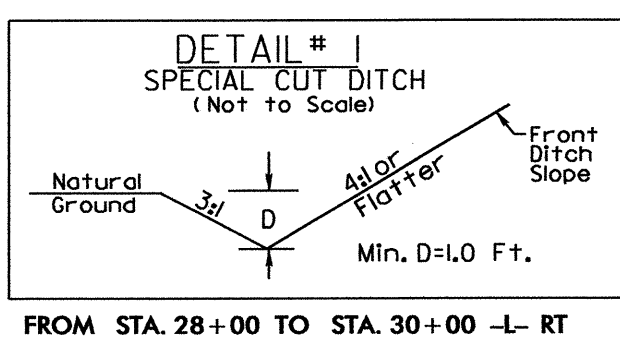
23 x 10 x 3  
1.5 inch Skimmer  
with 0.25 inch  
Orifice Diameter  
4 ft. weir  
ID 5.3B

CLASS 'B' RIPRAP  
EST 3 TONS  
EST 10 SY FF

SPECIAL CUT DITCH  
STA. 28+00 TO 30+00 -L- RT  
SEE DETAIL #1

-L-

PIs Sta 25+96.93	PI Sta 31+28.01
Os = 0' 55" 16.8"	Δ = 18' 59" 01.8" (LT)
Ls = 96.00'	D = 1' 55" 10.0'
LT = 64.00'	L = 989.02'
ST = 32.00'	T = 499.08'
	R = 2,985.00'
	DS = 50 MPH
	SE = 0.04



ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS



STATE OF NORTH CAROLINA  
DB 560 PG 1  
PB 9 PG 353  
PB 9 PG 354

WOODS

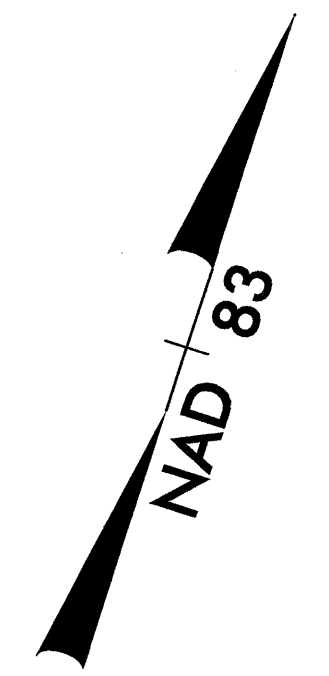
MTL GATE

WOODS

MARJORIE J. JOHNSON  
DB 408 PG 73

SEE SHEET 6 FOR -L- PROFILE  
SEE SHEETS X-2 THRU X-5 FOR CROSS SECTIONS

PROJECT REFERENCE NO. B-4273		SHEET NO. EC-6/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



POT Sta. 8+27.77

**BEGIN TIP PROJECT B-4273**  
Sta. 11+50.00 -L-

BL-4  
PINC 27+08.58  
8+98.22 -L-  
18.32' RT

STATE OF NORTH CAROLINA  
DB 936 PG 238  
PB 10 PG 345

R. REX CARPENTER  
DB 14-C PG 217  
PB 6 PG 50

Place Matting for Erosion Control  
on Slope as Work Allows.

Place Matting for Erosion Control  
on Slope as Work Allows.

MATCHLINE SEE SHEET 5  
STA. 20+00.00 -L-

FILE: 87185  
DATE: 10/25/18  
STAGES

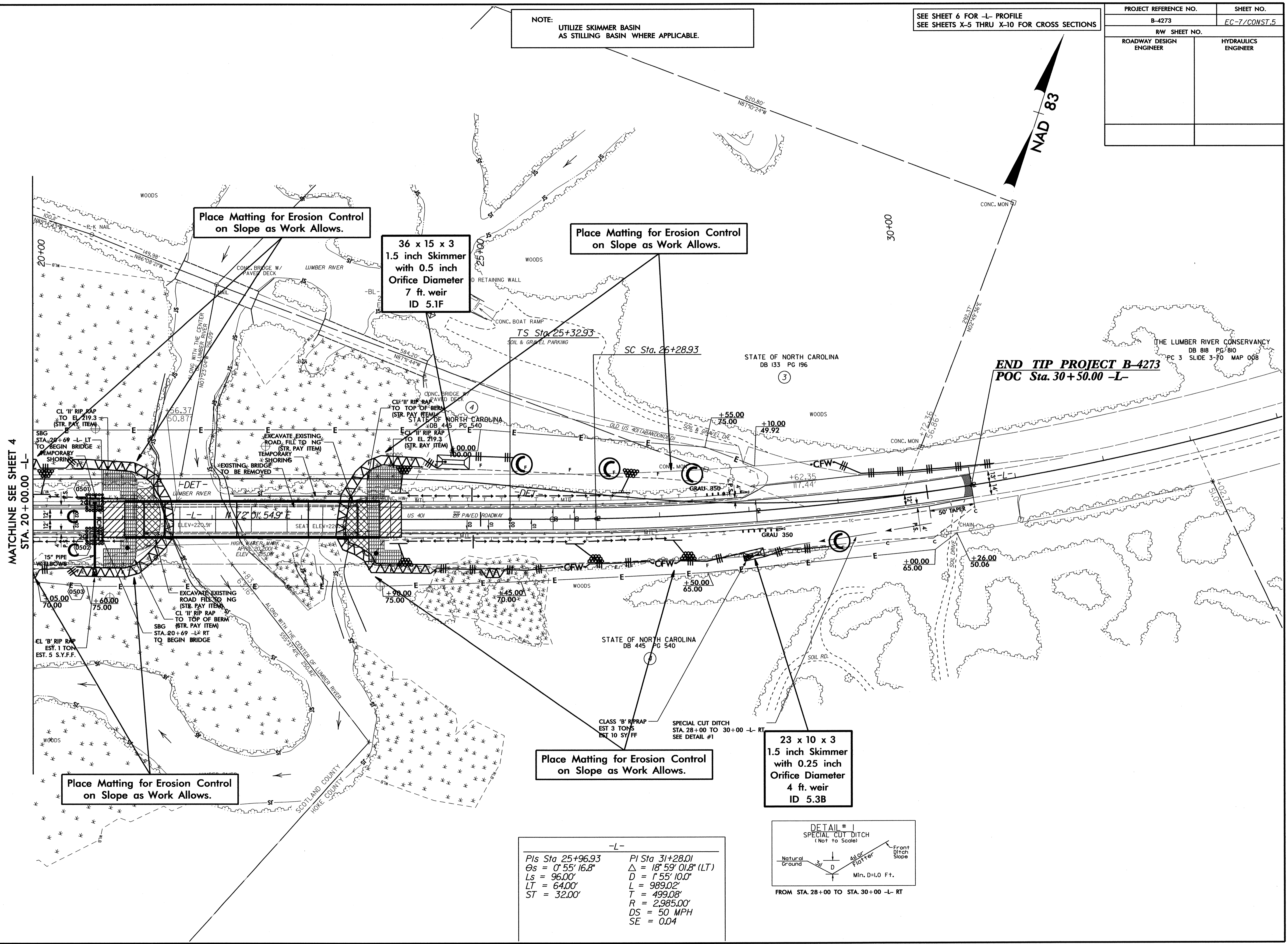


PROJECT REFERENCE NO.	SHEET NO.
B-4273	EC-7/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

SEE SHEET 6 FOR -L- PROFILE  
SEE SHEETS X-5 THRU X-10 FOR CROSS SECTIONS

NAD 83

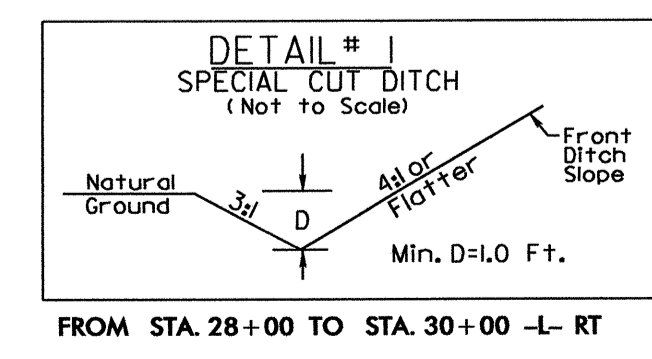


MATCHLINE SEE SHEET 4  
STA. 20+00.00 -L-

END TIP PROJECT B-4273  
POC Sta. 30+50.00 -L-

-L-

$Pis$ Sta 25+96.93 $\Theta_s = 0^{\circ} 55' 16.8''$ $L_s = 96.00'$ $LT = 64.00'$ $ST = 32.00'$	$PI$ Sta 31+28.01 $\Delta = 18^{\circ} 59' 01.8''$ (LT) $D = 1^{\circ} 55' 10.0''$ $L = 989.02'$ $T = 499.08'$ $R = 2,985.00'$ $DS = 50$ MPH $SE = 0.04$
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FILE: BR165  
DATE: 04/25/08  
ETW/MS

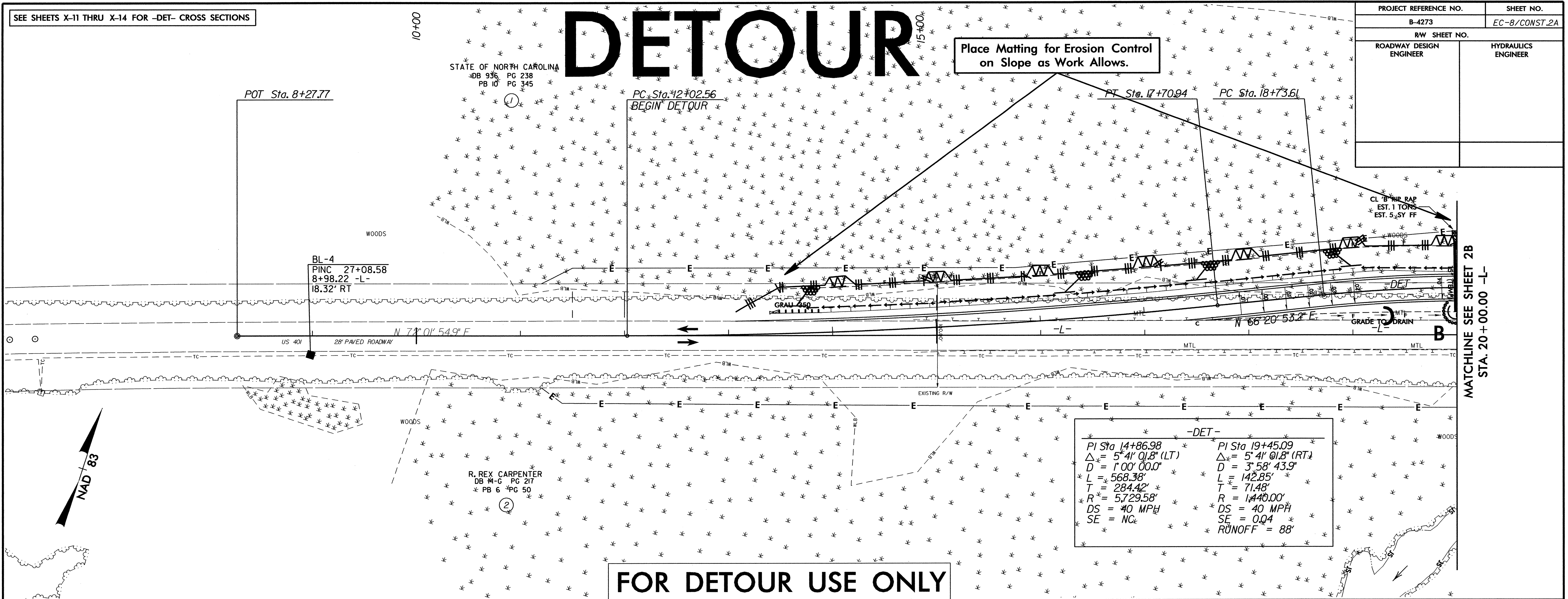


SEE SHEETS X-11 THRU X-14 FOR -DET- CROSS SECTIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4273	EC-8/CONST.2A
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

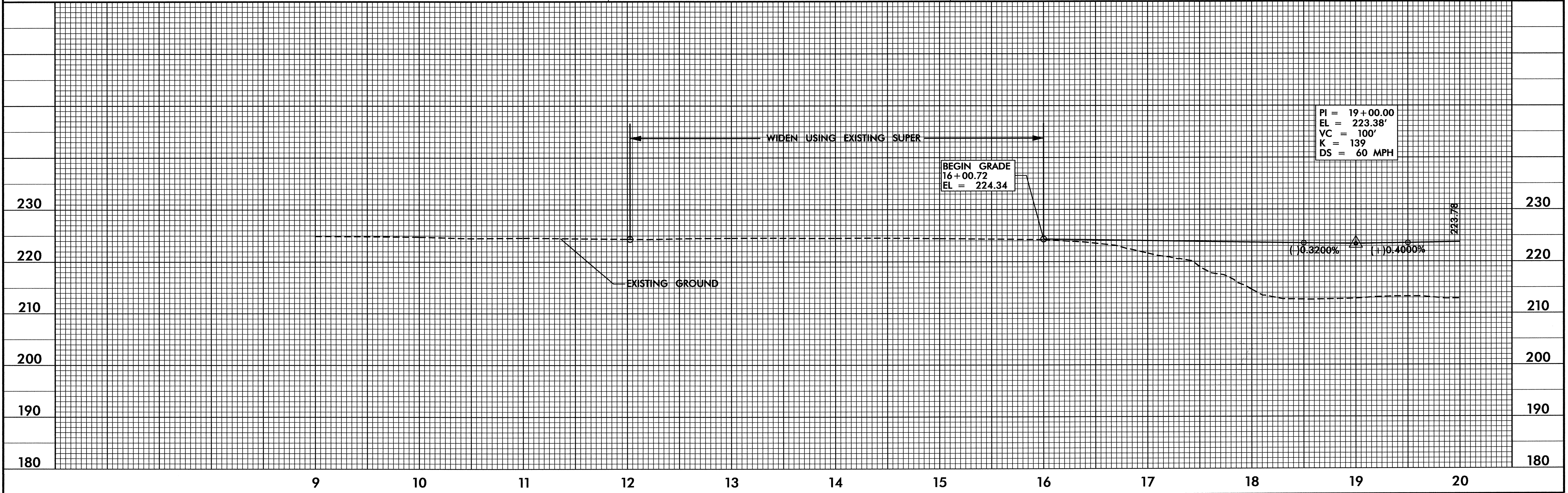
# DETOUR

Place Matting for Erosion Control on Slope as Work Allows.



FOR DETOUR USE ONLY

MATCHLINE SEE SHEET 2B  
STA. 20+00.00 -L-



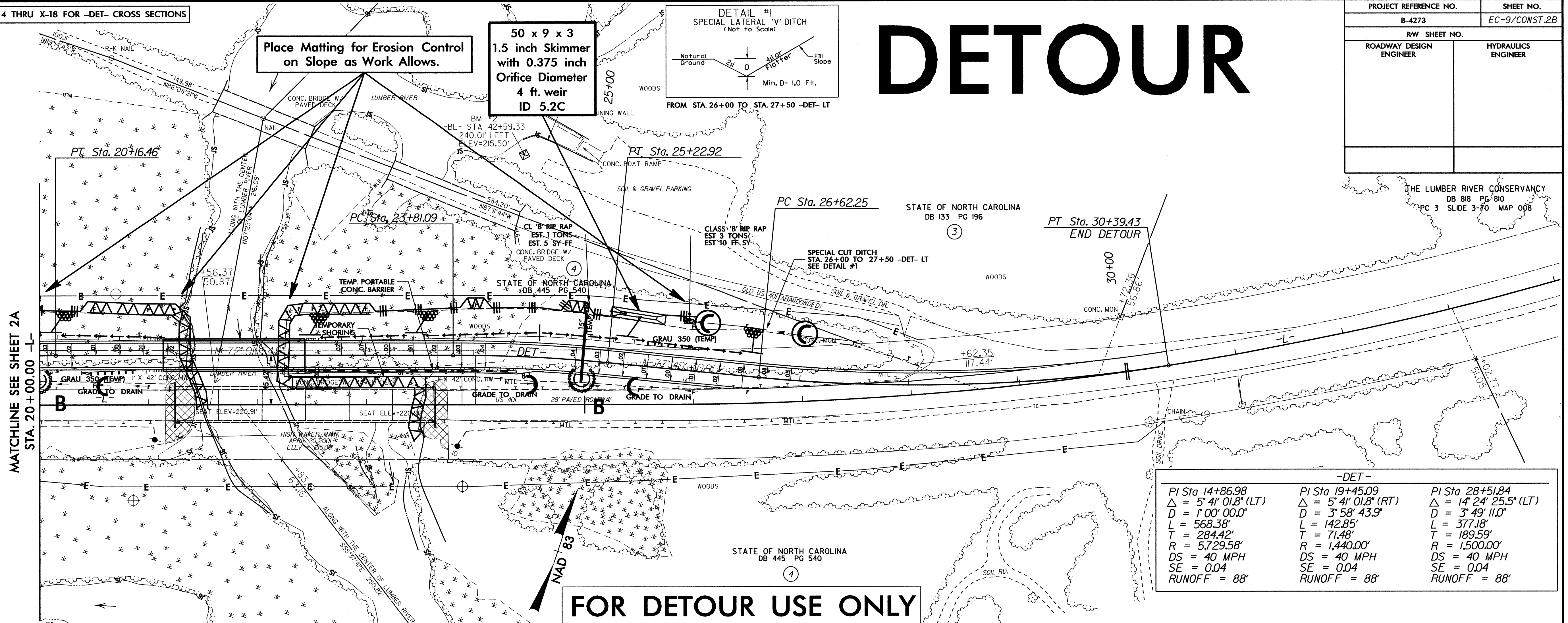
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DATE: \$DATE



SEE SHEETS X-14 THRU X-18 FOR -DET- CROSS SECTIONS

# DETOUR

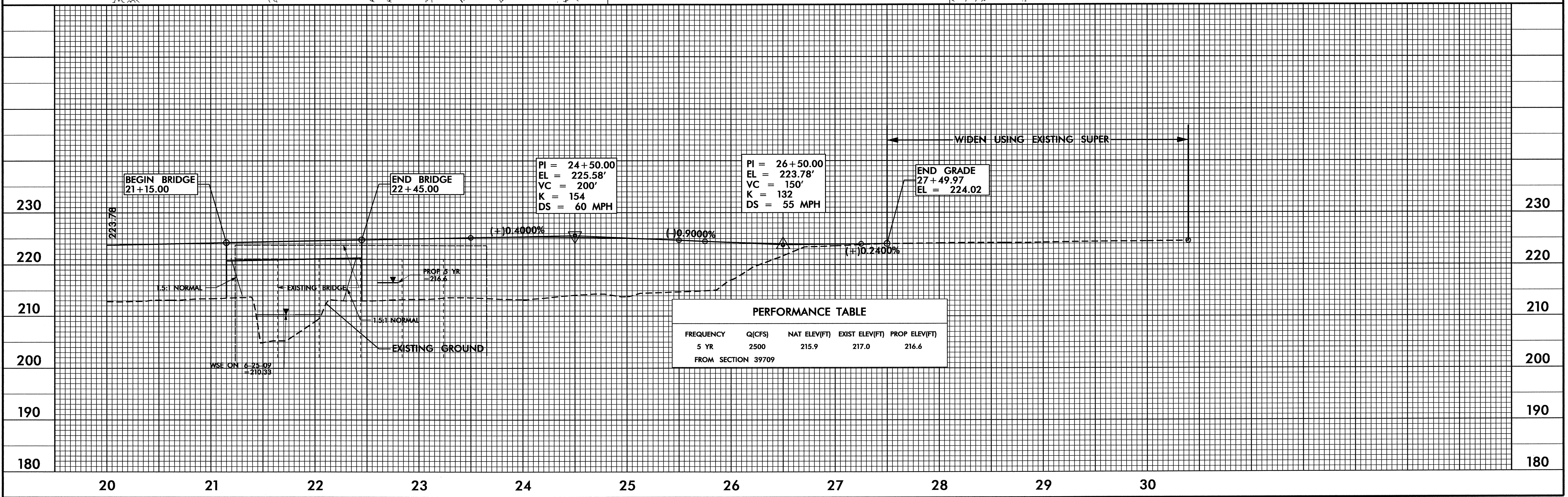
PROJECT REFERENCE NO. B-4273	SHEET NO. EC-9/CONST.2B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-DET-

PI Sta 14+86.98 $\Delta = 5' 41'' 01.8''$ (LT) $D = 1' 00'' 00.0''$ $L = 568.38'$ $T = 284.42'$ $R = 5,729.58'$ $DS = 40$ MPH $SE = 0.04$ $RUNOFF = 88'$	PI Sta 19+45.09 $\Delta = 5' 41'' 01.8''$ (RT) $D = 3' 58'' 43.9''$ $L = 142.85'$ $T = 71.48'$ $R = 1,440.00'$ $DS = 40$ MPH $SE = 0.04$ $RUNOFF = 88'$	PI Sta 28+51.84 $\Delta = 14' 24'' 25.5''$ (LT) $D = 3' 49'' 11.0''$ $L = 377.18'$ $T = 189.59'$ $R = 1,500.00'$ $DS = 40$ MPH $SE = 0.04$ $RUNOFF = 88'$
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**FOR DETOUR USE ONLY**



FILE: STILES DATE: 04/25/09